

WHAT IS CLAIMED IS:

1. A method for stretching an optical polymer film by holding both edges of the continuously supplied polymer film by holding means, and imparting tension thereto while advancing said holding means in a longitudinal direction of the film, which comprises allowing a locus L1 of the holding means from a substantial holding initiation point to a substantial holding release point on one edge of the polymer film, a locus L2 of the holding means from a substantial holding initiation point to a substantial holding release point on the other edge of the polymer film, and a distance W between the two substantial holding release points to satisfy the following equation (1), maintaining the supporting property of the polymer film, stretching the film in the presence of a state in which the volatile content is 5% or more, and then, decreasing the volatile content while shrinking the film:

$$|L2-L1| > 0.4W \quad (1)$$

2. The stretching method according to claim 1, wherein L1, L2 and W satisfy the following equation (2):

$$0.9W < |L2-L1| < 1.1W \quad (2)$$

3. The stretching method according to claim 1, wherein the difference in longitudinal advancing speed between the holding means on both edges of the polymer film is less than 1%.

4. The stretching method according to claim 1, wherein an angle made by a center line of a polymer film introduced for holding and a center line of a polymer film sent out to

a subsequent step after release of the holding is within 3°.

5. The stretching method according to claim 1, wherein the stretch ratio of the polymer film is from 1.2 to 10.

6. The stretching method according to claim 1, wherein the polymer film is stretched in the presence of a state in which volatile content is 7% or more.

7. The stretching method according to claim 1, wherein the polymer film is stretched in the presence of a state in which volatile content is 10% or more.

8. The stretching method according to claim 1, wherein the polymer film is once stretched at a stretch ratio of 2 to 10 in the presence of a state in which volatile content is 10% or more, and then shrunk 10% or more, thereby inclining an orientation direction of the polymer film at 40 to 50° to the longitudinal direction thereof.

9. A method for stretching a continuously supplied optical polymer film by imparting tension thereto while holding both edges thereof by holding means, which comprises

(i) stretching the film at least in a width direction thereof at a stretch ratio of 1.1 to 20.0,

(ii) adjusting the difference in longitudinal advancing speed between the holding means on both edges of the film to 1% or less,

(iii) bending the advancing direction of the film in the state that both edges thereof are held so that the advancing direction of the film at an outlet of the step of holding both edges of the film is inclined at an angle of 20 to 70° to a

substantial stretching direction of the film, and

(iv) maintaining the supporting property of the polymer film, stretching the film in the presence of a state in which the volatile content is 5% or more, and then, decreasing the volatile content while shrinking the film.

10. The stretching method according to claim 1, wherein the polymer is polyvinyl alcohol, a cellulose acylate, a polycarbonate or a polysulfone.

11. The stretching method according to claim 9, wherein the polymer is polyvinyl alcohol, a cellulose acylate, a polycarbonate or a polysulfone.

12. The stretching method according to claim 1, wherein the polymer is a vinyl alcohol-based polymer.

13. The stretching method according to claim 9, wherein the polymer is a vinyl alcohol-based polymer.

14. A method for producing a polarizing film comprising stretching a vinyl alcohol-based polymer by the method according to claim 1, and allowing a polarizing element to be adsorbed before or after stretching.

15. A method for producing a polarizing film comprising stretching a vinyl alcohol-based polymer by the method according to claim 9, and allowing a polarizing element to be adsorbed before or after stretching.

16. A polarizing film produced by the method according to claim 14, wherein the longitudinal direction of the film is inclined at an angle of 20 to 70° to a transmission axis direction.

17. The polarizing film of claim 16, wherein the longitudinal direction of the film is inclined at an angle of 40 to 50° to the transmission axis direction.

18. A polarizer in which at least one side of the polarizing film of claim 16 is protected with a transparent film.

19. The polarizer of claim 18, wherein the retardation of the protective film on at least one side at 632.8 nm is 10 nm or less.

20. A liquid crystal display device in which the polarizer of claim 19 is used as at least one of two polarizers disposed on both sides of a liquid crystal cell.

21. A birefringential film produced by stretching according to the method according to claim 1, in which a longitudinal direction of the film and an orientation direction thereof are inclined at 20 to 70° to a parallel.

22. A birefringential film produced by stretching according to the method according to claim 9, in which a longitudinal direction of the film and an orientation direction thereof are inclined at 20 to 70° to a parallel.